



Metropolitan Water Reclamation District of Greater Chicago

Press Release

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TARP at 50: How one of the world's largest public works projects for water has protected the Chicago region



The MWRD Board of Commissioners passed a resolution honoring the 50th anniversary of the MWRD's Tunnel and Reservoir Plan (TARP) on Oct. 20, commemorating 50 years of protection and clean water.

Fifty years ago this October, the Metropolitan Water Reclamation District of Greater Chicago (MWRD) formally adopted the Tunnel and Reservoir Plan (TARP) to reduce the worsening flooding and pollution problem caused by combined sewer overflows, and in the process protected regional waterways and Lake Michigan for generations to come.

As development spread rapidly through Chicago and suburbs in the 20th century, paved surfaces directed increasing amounts of stormwater runoff into the combined sewer systems. By the 1960s, Chicago area sewers were overflowing to the river more than 100 days a year and flooding had become a persistent issue. But Chicago leaders knew they could not rebuild the city to

save it. They needed a plan, and it was on Oct. 20, 1972, that TARP formally came into the picture.

It was initially dubbed as the Chicago Underflow Plan, a solution chosen out of 23 alternatives to address flood and pollution control, coming in at a price tag of \$1.223 billion. Known famously today as “Deep Tunnel,” the MWRD’s system is unmatched in size throughout the world but emulated just the same.

The TARP system is comprised of four large tunnels constructed 150 to 300 feet below ground to convey water by gravity into three mega reservoirs. The system is designed to reduce the amount of water pollution overflowing into waterways by holding the water until it can be pumped to and cleaned at MWRD water

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Work got underway in the 1970s to bore through limestone about 300 feet below ground to form the tunnels that would allow the MWRD to store and convey water throughout the Chicago area's 375-square miles of combined sewer systems.

reclamation plants. As the project expanded, so too did its impact, and after 50 years of service and protection, the MWRD estimates that tunnels and reservoirs have captured more than 1 trillion gallons of combined sewage to protect and improve area waterways and reduce flooding.

To commemorate 50 years, the MWRD Board of Commissioners on Oct. 20, passed a resolution to celebrate this milestone, and the MWRD hosted a virtual tour and TARP birthday party on Oct. 26.

“Over 50 years, TARP has provided long-lasting benefits for the environment and the people of the Chicago region,” said MWRD President Kari K. Steele. “We would not be where we are today without the forward thinking, dedication and hard work of our staff, funding partners, elected officials, contractors, and my predecessors on the MWRD Board of Commissioners. The monumental scale of TARP illustrates our commitment to protecting the water environment and communities in the Chicago region.”

TARP has been constructed in two phases. Phase I was completed in 2006 and consists of 110 miles of deep, large diameter tunnels with a total storage capacity of 2.3 billion gallons. Phase II consists of three reservoirs, two of which have been completed and a third that is under construction. When complete in 2029, TARP will provide about 20 billion gallons of storage capacity, including more than 17.5 billion gallons of combined sewage capacity, promoting flood control and preventing waterway pollution.

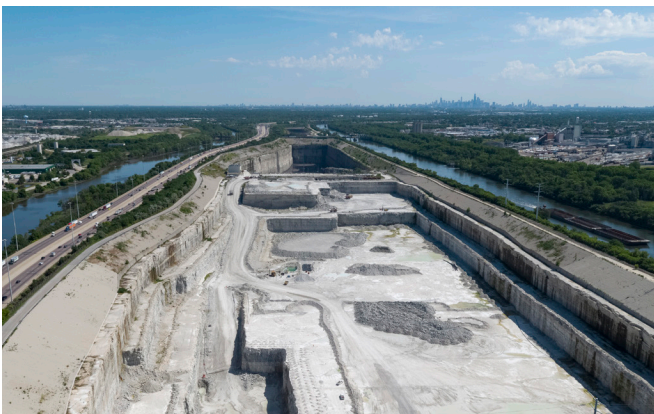
Once completed in 2006, the tunnel portion of TARP reduced pollution from sewer overflows by 85 percent, and now the reservoirs are going a step further, while

also reducing basement backups. Since coming into service in 2015 and late 2017, the Thornton Composite Reservoir and McCook Reservoir Stage 1, respectively, have added significant layers of protection. From 2017 through 2021, the total MWRD TARP system captured over 153 billion gallons of combined sewer overflows. During the same period, the Calumet system to the south and Upper Des Plaines System to the northwest have consistently captured nearly all combined sewer volume, while the Mainstream/Des Plaines System is expected to further increase percentage capture after completion of Stage 2 of the McCook Reservoir in 2029.

Over 50 years, a critical partnership between the MWRD and United States Army Corps of Engineers (USACE) Chicago District has helped advance TARP. Thanks to the support of the USACE, the MWRD received a lump sum payment of \$33.8 million in 2019 to assume responsibility for the design and construction of remaining elements of the McCook Reservoir Stage 2.

Without the system in place, there would be more than a trillion gallons of stormwater and wastewater overwhelming local sewer systems. As a result of TARP, area water quality has been improving.

“Because of TARP, our waterways are thriving to conditions once unimagined,” said MWRD Vice President Barbara McGowan. “Fish and aquatic life have rebounded, marinas and riverside economic development abound, recreation, commerce and tourism are being drawn to the Chicago Area Waterway System, and waterfront real estate values have skyrocketed. This is not accomplished without healthy water quality.”



From below ground in the tunnels to high above the rim of the reservoirs, the MWRD has documented the different phases of the Tunnel and Reservoir Plan (TARP). The MWRD bored through more than 100 miles of tunnels, then lined them with concrete, installing drop shafts, gates and pumping stations and other structures, and then began the next phase of excavating reservoirs, including the Thornton Composite Reservoir (middle row, bottom right) and McCook Reservoir (bottom left).



The infrastructure of the MWRD's Tunnel and Reservoir Plan has afforded the region's waterways with cleaner waterways, a resurgence of fish and recreational opportunities. MWRD fishing surveys have shown an increase in both the total number of fish and fish species. Native species have also increased, and the number of invasive species has dropped.

Recovering Resources, Transforming Water

Established in 1889, the MWRD (www.mwr.org) is an award-winning, special purpose government agency responsible for wastewater treatment and stormwater management in Cook County, Illinois.